Integrated Flood Management

Integrated Flood Management (IFM) is an approach to dealing with flood risk that recognizes the connection of flood management actions to water resources management, land use planning, environmental stewardship and sustainability. IFM also recognizes the importance of evaluating opportunities and potential impacts from a system perspective, and the importance of coordinating across geographic and agency boundaries.

IFM uses various techniques to manage flooding, including structural projects (such as levees), nonstructural measures (such as land use practices), and natural watershed functions. Depending on the characteristics of individual watersheds, various resource management strategies may be used, such as: agricultural land stewardship, conjunctive water management, conveyance, ecosystem restoration, forest management, land use planning and management, surface storage, system reoperations, urban runoff management and watershed management.

(Detailed information on these resource management strategies is available in the California Water Plan Update 2009, www.waterplan.water.ca.gov.)

A Look Back

Flood management practices traditionally focused on reducing the chance of flooding and flood damages through physical measures intended to store floodwaters and to guickly convey potential floodwaters away from areas to be protected. Although this approach can reduce the intensity and frequency of flooding, it can also limit the floodplain's natural function and have other unintended consequences.

Natural Watershed Features Assist Flood Management

In recent years, flood managers have recognized the potential for natural watershed features to reduce the intensity or duration of flooding. Natural watershed features include: undeveloped floodplains that can store and slowly release floodwaters and wetlands acting as sponges, soaking up floodwaters, filtering runoff, and providing opportunities for infiltration to groundwater. Natural watershed features also include healthy forests, meadows, and other open spaces that can slow runoff during smaller flood events, reducing peak flows, mudslides, and sediment loads in streams.

(continued)

California promotes an integrated approach to statewide flood management, which includes improving public safety, reducing flood damages, enhancing environmental stewardship and supporting water supply.



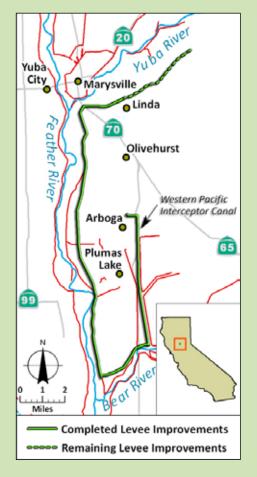








Feather River Setback Levee (photo: Yuba County Water Agency)



FloodSAFE:

The Department of Water Resources launched FloodSAFE in 2006 to address the increasing flood risks throughout California. FloodSAFE is a multi-faceted initiative designed to improve flood management in the state, using a system-wide approach while also carrying out regional projects, and enhancing DWR's core flood management programs already in place. FloodSAFE has five primary goals:

- · Reduce the chance of flooding
- Reduce the consequences of flooding
- · Sustain economic growth
- Protect and enhance ecosystems
- Promote sustainability of the flood management system

For more information, visit <u>www.water.ca.gov/floodsafe</u>

(continued)

Example of Integrated Flood Management

Lower Feather River Corridor Management Plan and Three Rivers Levee Improvement Authority

The Lower Feather River Corridor Management Plan – a pilot for this approach—is being developed for a 20-mile reach of the Feather River between Yuba City and the Sutter Bypass. Levee failures in 1986 and 1997 inundated this area, causing approximately \$600 million in damages and several deaths.

The Lower Feather River Corridor Management Plan includes a strategy for future management and maintenance of flood protection facilities, conveyance channels, floodplains and uplands.

The Three Rivers Levee Improvement Authority's (TRLIA) Feather River Setback Levee is a component of that corridor management strategy.

Yuba County and Reclamation District 784 established TRLIA in 2004 as a joint-powers agency, with the goal of increasing flood protection in the region. TRLIA's levee program includes the 29-mile levee system surrounding the south Yuba County communities of Linda, Arboga, Olivehurst, and Plumas Lake and includes the Bear River, Feather River, Yuba River, and the Western Pacific Interceptor Canal.

Approximately 6 miles in length, the Feather River Setback Levee has resulted in about 1,600 acres of expanded floodway and habitat along the Feather River. Regionally, the setback is expected to lower water levels by more than 1.5 feet during large flood events, easing pressure on both the Yuba and Feather River Levees and providing regional flood protection benefits to South Yuba County as well as the cities of Marysville and Yuba, but without transferring flood risk to downstream locations.

For more information, contact us at: **sfmp@water.ca.gov** or visit **www.water.ca.gov/sfmp**



